

Silicon NPN Power Transistors

2SD613

DESCRIPTION

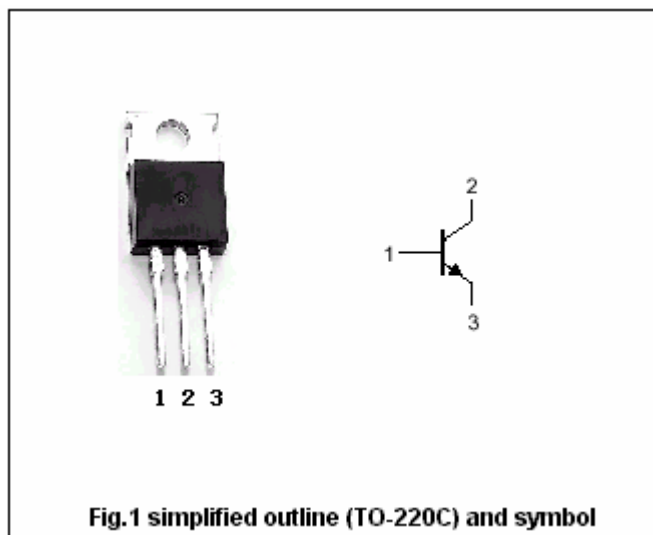
- With TO-220C package
- Complement to type 2SB633
- High breakdown voltage : $V_{CEO}=85V$
- High current 6A

APPLICATIONS

- Recommend for 25-35W high fidelity audio frequency amplifier output stage

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

Absolute maximum ratings($T_c=25^\circ$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	85	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		6	A
I_{CM}	Collector current-peak		10	A
P_C	Collector power dissipation	$T_c=25^\circ$	40	W
T_j	Junction temperature		150	$^\circ$
T_{stg}	Storage temperature		-55~150	$^\circ$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=50mA$; $R_{BE}=\infty$	85			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=5mA$; $I_E=0$	100			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=5mA$; $I_C=0$	6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=4A$; $I_B=0.4A$			2.0	V
V_{BE}	Base-emitter voltage	$I_C=1A$; $V_{CE}=5V$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=40V$; $I_E=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V$; $I_C=0$			0.1	mA
h_{FE-1}	DC current gain	$I_C=1A$; $V_{CE}=5V$	40		320	
h_{FE-2}	DC current gain	$I_C=3A$; $V_{CE}=5V$	20			
f_T	Transition frequency	$I_C=1A$; $V_{CE}=5V$		15		MHz
C_{OB}	Output capacitance	$I_E=0$; $V_{CB}=10V$; $f=1MHz$		110		pF

◆ h_{FE-1} classifications

C	D	E	F
40-80	60-120	100-200	160-320

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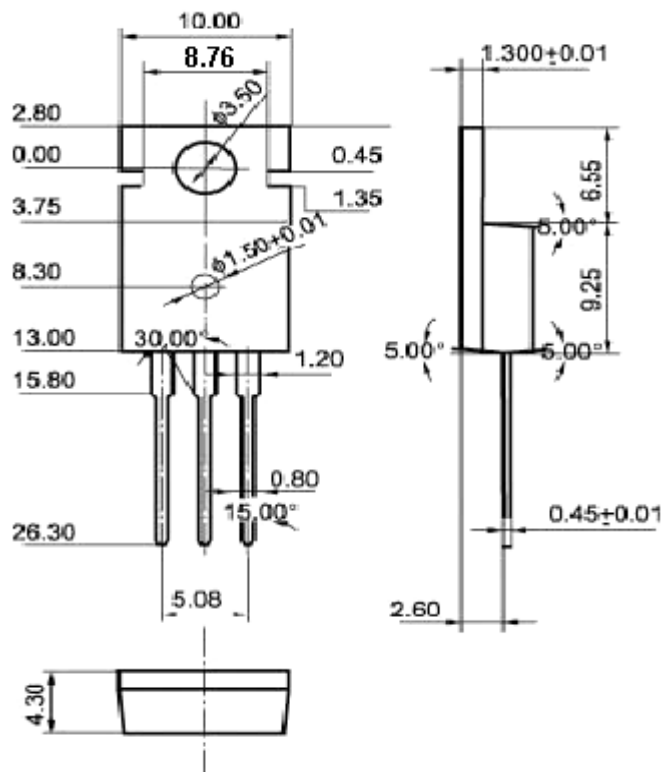


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)